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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,270

12/28/2005

Hiromasa Suzuki

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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
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EXAMINER

GREGORIO, GUINEVER S

ART UNIT

PAPER NUMBER

4162

NOTIFICATION DATE

DELIVERY MODE

07/09/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Office Action Summary	Application No. 10/562,270	Applicant(s) SUZUKI, HIROMASA	
	Examiner GUINEVER S. GREGORIO	Art Unit 4162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/28/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The specification is replete with grammatical errors and misspelling. For example, the specification recites “a support comprising a ceria component at least” (paragraph 1, line 3). In addition, the specification contains misspelled words such as “zirocnia” and “combinedly” (paragraph 3, line 4 and 5). Please correct these and any other grammar or spelling errors found in the application.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 12 recites “wherein the catalytic ingredient in amount of 20 to 100% by weight thereof is loaded”. Claim 12 fails to particularly point out whether the % by weight is the total weight of the mixture or whether the % weight is the weight of the catalyst.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 13 and 14 are rejected under 35 U.S.C. 101 because the claims do not recite a method having a useful, concrete, and tangible result. The claim states the steps of "assuming a heat capacity" which does not correspond to a definable parameter and appears to be solely a mental step. Furthermore, the claims recite an "ability of the catalyst to be excellent" which is not an objective criteria for one of ordinary skill in the art to ascertain. The step of evaluating also appears to be a mental step.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Blanchard et al. (U.S. Pat. No. 6,506,705 B2). Blanchard et al. teaches a cerium oxide or mixture of cerium oxide and zirconium oxide (column 1, lines 41-43). Blanchard et al. teaches using the cerium oxide or cerium zirconium oxide mixture as a catalyst or catalyst support (column 1, lines 44-46). Furthermore Blanchard et al teaches extruding the oxide mixture and using the extruded compound in combination with catalytically active metals such as platinum, rhodium, palladium, ruthenium, or iridium (column 8, lines 31-35; column 8, lines 57-60).

Regarding the characteristic of oxygen sorbing and heat capacity, examiner takes the position that Blanchard et al. teaches a catalyst which meets the limitations set out by

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the applicant since the material is commensurate with the claims. Regarding claim 5, Blanchard et al teaches the Ce/Zr ratio range 1/9 to 9/1 (column 2, lines 10-11). In addition, Blanchard et al. teaches an additive from the group consisting of aluminum, silicon, thorium, titanium, niobium, tantalum and rare-earth metals (column 2, 19-21). Blanchard teaches **rare earth metals** have an atomic number between 57-71 (column 2, lines 24-25). More specific, Blanchard et al. teaches yttrium, **lanthanum**, **neodymium** and **praseodymium**. Regarding claim 7, Blanchard teaches the maximum amount of additives can be at most 50% but preferably 1-20 % (column 2 lines 40-45). Since Blanchard et al. teaches a catalyst / catalyst support which meets the limitations recited by the applicant, examiner takes the position that the catalyst / catalyst support inherently possesses the oxygen sorbing and heat capacity characteristics recited in claims 1 and 2.

Regarding claims 10 and 11, Blanchard et al. teaches using a binder from a group consisting of silica, alumina, clays, silicates, titanium sulphate or ceramic fibers (column 8, lines 11-13).

Regarding claim 12, Blanchard et al. teaches addition of a catalyst such as platinum, rhodium, palladium, ruthenium or iridium. Blanchard teaches the maximum amount of additives can be at most 50% but preferably 1-20 % (column 2 lines 40-45).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Brenzy et al. teaches compositions of cerium oxide and zirconium oxide having a high oxygen storage capacity (U. S. Pat. No. 6,528,451 B2, column1, lines 7-9).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GUINEVER S. GREGORIO whose telephone number is (571)270-5827. The examiner can normally be reached on Monday-Thursday, 10:30-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gsg

/Jennifer McNeil/
Supervisory Patent Examiner, Art Unit 4162